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ABSTRACT

Performance-based policy in postsecondary vocational education and employment training programs has two major goals. First, it seeks to increase the basic and job-specific skills needed by program participants to perform effectively in occupations related to training. Second, it aims to stimulate debate over what the appropriate outcomes for vocational education and employment training programs are, while freeing program providers to determine how such aims can best be achieved. For performance-based policy to be effective, it must meet four requirements: (1) it must be possible to define desired outcomes clearly; (2) it must be possible to measure these outcomes accurately and efficiently; (3) measures of performance must affect levels of funding; and (4) useful information on outcomes must be available for consumers and policymakers. Research has demonstrated that it is possible to meet these four requirements. Policy implications for crafting a performance-based approach to vocational education and employment training policy include the following: (1) it is important to restate the primary goal of adopting a performance-based orientation; (2) state policy should require the adoption of multiple definitions of performance; and (3) in linking funding to performance, the state needs to consider carefully the differences between employment training and vocational education programs, with performance contracting more appropriate for employment training. (KC)

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PERFORMANCE-BASED POLICY OPTIONS FOR POSTSECONDARY VOCATIONAL EDUCATION AND EMPLOYMENT TRAINING PROGRAMS

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PERFORMANCE-BASED POLICY OPTIONS FOR POSTSECONDARY VOCATIONAL EDUCATION AND EMPLOYMENT TRAINING PROGRAMS

Historically, education policy in the United States has been more concerned with process than with outcomes. The federal government flirted briefly with performance-based policy in 1970 when the Office of Economic Opportunity launched an experiment aimed at determining whether private contractors could teach students more effectively than public schools. Although the experiment was perhaps unfairly maligned, most analysts of the results concluded that it was unsuccessful, and efforts to make federal education policy more outcome-oriented abruptly ceased (Campbell & Lorion, 1972; Gramlich & Koshel, 1975). In the wake of the recent school reform movement, a few states have developed performance-based features for state education policies. Tennessee, for example, uses performance-based funding in its higher education system. California has tried financial incentives for improving student achievement test scores. Florida uses placement standards in its funding for secondary vocational education; and Arizona has collected and published data on the effectiveness of its community colleges. Several states have explored different approaches to merit pay and other types of teacher or school incentive systems. Nevertheless, most states have stuck with procedural policies for directing public education.

In the employment training field, public policy has paid more attention to outcomes. The Job Training Partnership Act (JTPA) has sought to revitalize the federal employment training effort by emphasizing performance, and several states have modeled state efforts around outcome measures and performance contracts. California's Employment Training Panel (ETP) programs, for example, rely heavily on performance contracting to achieve state policy objectives. Such efforts, however, are relatively new and untested. Moreover, they have tended to define performance in ways that are rather narrow and short-term.

This paper explores some of the major issues surrounding the adoption of performance-based policies in postsecondary vocational education and employment training programs. Performance-based policy has two major goals. First, it seeks to increase the basic and job specific skills needed by program participants to perform effectively in occupations related to training. Second, it aims to stimulate debate over what the appropriate outcomes

for vocational education and employment training programs are, while freeing program providers to determine how such aims can be best achieved.

In thinking about the forms that such policy might take, it is important to distinguish employment training from vocational education. By employment training, we mean relatively short-term programs (under twelve months) typically aimed at a particular industry or specific occupation, stressing the acquisition of job specific skills. In contrast, vocational education refers to programs that are generally longer term (one or two years), which stress theoretical and conceptual principles, and are more often targeted on clusters of occupations. Employment training, therefore, places more emphasis on achieving specific labor market outcomes, while vocational education is more likely to emphasize learning outcomes that may be generalized across a cluster of occupations. This distinction is not iron clad. Employment training does not ignore learning outcomes, nor can vocational education be inattentive to outcomes in the labor market. Rather, it is a matter of emphasis that needs to be remembered as performance based policies are developed for each set of programs.

Successfully crafting performance-based policy depends on satisfying four requirements. First, it must be possible to define appropriate, multiple measures of performance for vocational education and employment training. Second, accurate, timely data must be available for these measures at reasonable cost. Third, performance on these measures must be tied to funding. And fourth, information on the performance of various providers must be available to consumers and policymakers.

The remainder of this paper explores these four requirements. First, it addresses the definition of performance for vocational education and employment training. Second, it explores alternatives for tying performance to funding and strategies for information disclosure. Third, it discusses the availability of data on performance and how existing data sources might be improved. Finally, it offers some concluding observations and recommendations.

DEFINING AND MEASURING PERFORMANCE

Traditionally, public policy has relied on labor market outcomes as primary indicators of the effectiveness of vocational education and employment training programs. Such measures as placement rates, time to placement, duration of employment, and earnings have figured prominently in assessments of these programs. Vocational educators, and to a lesser degree providers of employment training, have often objected to the exclusive focus on labor market outcomes. A variety of factors beyond their control affect labor market outcomes. Hence, they argue, holding them accountable for employability rather than employment would be more appropriate for judging program success. Employability means having the necessary skills to perform effectively on the job, regardless of whether employment opportunities are immediately available. Consequently, assessing employability requires attention to a set of learning outcomes, for which service providers can assume greater responsibility.

Neither set of measures is sufficient for evaluating vocational education or employment training programs. It is easy to imagine that in a flourishing economy placement rates and other measures of labor market outcomes could be high for even poor programs. Similarly, programs that teach skills that are no longer needed in the labor market perform little useful service, no matter how effectively such skills are taught. Consequently, a combination of learning and labor market outcomes are needed to evaluate program effectiveness. How should these be defined and measured? What are some important caveats on their use in public policy?

Labor Market Outcomes

Of the two sets of outcomes, labor market outcomes are probably the more familiar. California's Employment Training Panel (ETP) programs, for example, require placement and remaining on the job for ninety days as conditions for payment under the performance contracts negotiated with its trainers. Placement rates figure prominently in JTPA, and a few states have established placement criteria as the primary determinant of whether to continue specific vocational education offerings.

Generally, labor market outcomes include the following types of measures:

- *Placement*

  Placement rates, expressed as a percentage of those completing a program or as a percentage of those initially enrolled, have been popular measures of labor market outcomes. Further distinctions are often made between placement in jobs related to training versus placement in unrelated jobs. Additional distinctions are sometimes made between public and private sector employment.

- *Time to Placement*

  The amount of time—measured in days, weeks, or months— between completion of a program and placement on the job is sometimes used as an indicator of program effectiveness. Such a measure is equivalent to time unemployed between completion and initial placement. A related measure is time unemployed between jobs once an initial placement has been made and subsequently terminated.

- *Duration of Employment*

  Once placed, the amount of time an individual remains employed may be used as an indicator of program effectiveness. This may be measured as the amount of time spent in the initial job, amount of time with the initial employer, or amount of continuous employment in a series of jobs or with a series of employers.

- *Earnings*

  Earnings are another indicator of program effectiveness. They may be measured as an hourly rate at time of placement or total earnings over a month, quarter, or year. If collected over time, earnings are an indirect indicator of upward job mobility and advancement. In the event of part-time employment, it is desirable to determine whether employment part-time is voluntary (i.e., full-time employment is not desired by the employee) or involuntary (i.e., full-time employment is desired but cannot be obtained).

- *Employer/Employee Satisfaction*

  Measures of labor market outcomes have also included indicators of satisfaction on the part of employers or employees. While more subjective than other measures, these can still be quantified to some extent.

Most of these measures of labor market outcomes do not pose serious problems in regards to definition or measurement. As will be discussed in more detail in the section entitled, "Improving State-Level Information on Performance," there are methodological problems in data collection that have made it difficult to obtain accurate data on labor market outcomes on a sufficiently representative group of program completers or to obtain data over periods of time that were sufficiently long enough. These requirements for improved response rates in follow-up studies and better longitudinal data will also be addressed in the above mentioned section.

The major difficulty in using labor market outcomes to assess program effectiveness lies in isolating outcomes that may truly be attributed to the effectiveness of a program from those that result from factors beyond the control of a program. Two obvious external factors are general economic conditions and student characteristics. If completers of different programs face different economic conditions, comparisons of unadjusted labor market outcomes will not yield accurate comparisons of the relative effectiveness of the programs. Similarly, programs that serve students with different characteristics may realize different labor market outcomes that have little to do with program effectiveness. For example, a trade program that serves mainly women may have lower placement rates than a similar program that serves mostly men. This is not because the program is inferior, but because its graduates continue to face discrimination in the labor market. Evaluations of program effectiveness in terms of labor market outcomes, therefore, must distinguish programmatic effects from outcomes that result from factors beyond the control of the vocational education or employment training program. The inclusion of good statistical controls will help to achieve this distinction.

There is a third major external variable that can affect labor market outcomes—namely, the knowledge and abilities participants bring to a program at the outset. It is a well known fact in education circles that the easiest way to achieve good results is to admit only good students. Controlling for these variables, however, requires measures of learning outcomes.

Learning Outcomes

Learning outcomes provide a more direct measure of program effectiveness than labor market outcomes and are less subject to external influences beyond the control of program providers. We have found it useful to distinguish among four different types of learning outcomes: (1) program completion, (2) benchmark mastery based on competency testing, (3) value-added, and (4) program improvement over time. As these may be less familiar measures of outcomes, we will elaborate on each briefly.

Program Completion

Program completion takes many forms in vocational education and employment training programs. It can mean the awarding of a formal degree or certificate, the completing of an integrated sequence of courses or other plan of study, or simply finishing a single course designed to meet a very immediate and specific skill need. In many instances, completion depends upon accumulating a certain number of credits with satisfactory grades. In some cases, it may mean little more than simply having put in a certain amount of time attending classes and participating in laboratories.

Alternatively, in contrast to credit accumulation or passing specified amounts of time, completion can represent the mastery of a certain set of skills—that is, *demonstrated acquisition* of the general and job specific skills necessary to perform effectively an entry level job in an occupation related to the student's training. In this case, the critical test is mastery, regardless of the amount of time mastery requires. For some students, mastery may take a long time; for others, it may be accomplished quite quickly. In every case, however, a program participant is not considered to have completed the program until successful mastery of the required skills has been accomplished.

Note the emphasis on "demonstrated acquisition." Passing time in vocational education or receiving a degree or certificate count for nothing under such a definition unless students have demonstrated in some measurable fashion that the necessary general and job specific skills have been acquired. Such demonstration, therefore, depends on satisfying three requirements. First, it must be possible to determine rather precisely the kinds of general and job specific skills required to perform a particular job. Second, it must be possible to specify the degree of mastery of these skills that is likely to be needed for satisfactory performance on the job. Third, it must be possible to measure objectively whether

necessary levels of mastery have been achieved. Competency testing is one method for meeting these three requirements.

Although competency-based curricula and competency testing are widely used in vocational education, they have never been recognized as possible tools for educational policy. Rather, policy experience with competencies comes mainly from the Job Training Partnership Act (JTPA), as well as some state employment training programs.

The term "competency" refers to learnable outcomes. Examples of different kinds of competencies include *skills* such as typing or computer programming; *knowledge* such as an awareness of career options or academic knowledge; *attitudes* such as regard for others or initiative; and *behavior* such as promptness, cooperation, or dress standards (Center for Employment and Income Studies, n.d.). Competency-based learning programs structure curricula by identifying competencies which students need to learn, building curricula materials to teach these specific competencies, testing students on their mastery of the skills, and advancing students through the program as they gain competencies.

Curricula based on competencies can create improved learning environments for students. In a study of the JTPA Youth Competency-based Employment and Training Program, The Center for Employment and Income Studies (n.d., p. 9) identified six advantages to the competency-based approach. First, a competency-based approach can readily identify and address individual needs. Because assessment is targeted to the individual and because services may be provided which specifically address skill needs as revealed by an assessment, individual needs are consistently the focus of program activities. Second, this approach fosters achievement by providing specific, attainable objectives which can be measured in terms that are clear both to the participant and to program staff. Third, a competency-based approach frequently increases motivation and interest in participation in services. Youth (and most adults as well) tend to respond positively to situations in which learning is determined by demonstration of a skill, rather than by length of time one has been in a classroom or work situation. Fourth, a competency-based approach provides for a more realistic understanding of one's own skills, abilities, and preferences, since it concentrates on what a person actually does. Fifth, because competency-based approaches imply objective standards of achievement, they tend to have credibility both for youth and the community. Youth tend to feel that they are not victims of the whim of an unfriendly teacher or counselor. Finally, competency-based approaches that are based on employer input tend to offer the individual a more realistic picture of the world of work and the job market.

Although offering powerful features, programs that try to use competency-based curricula must address some important issues. First, either program administrators or the training agency must decide which competencies programs will teach. This decision involves setting priorities among skills and choosing skills that are appropriate for the occupation taught. Second, there are many practical problems. Implementation of competency-based curriculum requires that definitions of competence be reduced to manageable terms, broken into recognizable and teachable units, and assessed reliably. Dangers include breaking the curriculum into specific measurable skills which do not sum up to the requirements of the occupation. Third, competency-based programs create assessment issues. Programs must decide how to measure student success. If all skills needed for an occupation are not defined in the competencies, the measure of students' success—instead of the demands of the occupation—can dictate what is taught (i.e., teaching to the test). A fourth problem is setting standards or benchmarks of success. If standards are too low they will erode motivation to excel, yet if they are set too high, too few people pass the course. In addition, standards may be set in order to pass a certain percentage of students, while actual job success would dictate a different standard.

Benchmark Mastery

Benchmark mastery is a subset of competency-based program completion. By definition, completion means mastery of the full complement of skills necessary for effective performance on the job. Mastery of some but not all of the skills, however, represents learning. By assessing the mastery of individual skills as a program progresses, rather than waiting until the end, it is possible to keep track of partial completion and the effectiveness of various components of a full program. For example, if a program consists of three or four separate courses, monitoring the achievements of students in each course will provide a means for evaluating the effectiveness of each course, even though mastery of the material in any individual course is insufficient for successful performance on the job.

Measuring mastery at the end of a program or at the end of its components, however, does not necessarily indicate that learning has occurred unless we assume that all students started with no knowledge. Measuring competencies only at the end of a program may also encourage institutions to enroll students who have the least to learn (see Chickering & Claxton, 1981; Micek & Arney, 1973). Indicators of the gain in knowledge, or "value-added," are therefore desirable.

Value-Added

While competency-based program completion constitutes a good indicator of a desirable outcome for vocational education programs, it is not a sufficient indicator of program effectiveness at imparting general and job specific skills. Students entering a program with high levels of mastery may complete with little or no assistance from the program. Moreover, programs may be tempted to cream in order to obtain higher completion rates. A better indicator of program effectiveness, therefore, is "value-added"—the amount of general and job specific skills acquired between entry to and exit from the vocational education program.

Competency-based curricula and competency testing lend themselves well to measures of value-added, provided assessment is done at the beginning as well as at the end of the program. There are, however, potential problems that need to be addressed. First, it is sometimes difficult to determine precisely what has been responsible for whatever value-added is observed. For example, suppose that value-added testing reveals significant gains in the math and science skills required for a particular occupation while participating in a vocational education program. If participation was limited to the vocational education program, these gains are rightly attributed to the program. However, if the student also participated in math and sciences courses outside the vocational education program, it will be difficult to sort out precisely what aspects of the postsecondary curriculum were responsible for the gains.

Second, while value-added indicators of performance are less likely to encourage creaming (because programs get credit for what they impart instead of for what students bring), one must question the value of gains that fall short of program completion. If, by definition, completion represents the acceptable standard for entry-level employment, then anything short of completion is not likely to lead to employment. A special needs student may make great gains in a vocational education program on a value-added measure, but if the student fails to complete, what really has been accomplished? Successful special education programs have addressed this problem not by accepting subcompletion accomplishment but by working with employers to redefine job responsibilities. They aim to define a job commensurate with the abilities of a handicapped student to perform it. In effect, they create a new kind of entry-level job and design standards of program completion that are appropriate for it. Students must still complete the occupational program, therefore, to perform effectively in this redefined job. In the final analysis, value-added is not a substitute

for program completion. Rather, it is an additional indicator of program effectiveness that should be examined along with completion.

Program Improvement Over Time

Value-added measures the learning gains of individual participants over time. It is also sometimes useful to measure changes over time in the accomplishments of courses, programs, or institutions. Such measures are particularly important when performance is tied to funding. Funding procedures that reward only the high achievers may ignore programs that have realized the greatest gains. Such procedures are subject to the criticism that they reward programs that are least in need of additional resources. By monitoring the progress of initially low-achieving programs and rewarding improvement, a performance-based policy will encourage all programs to strive for better results.

There is, however, a risk in such an approach. While poor programs may indeed realize substantial improvement (e.g., raising the average scores of their participants by, say, fifteen percent over the previous year), it is possible that such gains have little practical effect on improving the employability of the participants. The gains can be large in absolute terms, but still be well short of what participants need to work successfully in a job related to their training. From a policy perspective, therefore, eliminating the program may be preferable to rewarding it.

Additional Caveats

In contrast to labor market outcomes, we have relatively little experience with the systematic, widespread measurement of learning outcomes in postsecondary vocational education and employment training. While competency-based curricula are used widely in postsecondary vocational education, there are no uniform standards that would permit comparisons of performance across programs or institutions. JTPA has encouraged the adoption of competencies and benchmarks for youth, but these also are far from uniform. Similarly, the development of competency-based approaches to employment training have been highly decentralized and idiosyncratic.

Assuming that some standardization is desirable for purposes of improving accountability through cross-program comparisons (and the benefits of standardization must be weighed against the benefits of decentralized programs individually tailored to local needs), it must be remembered that curriculum development, the design of assessment instruments, and the conduct of assessment are costly and time consuming. Moreover, paper

and pencil tests are not always well suited to assessing the mastery of competencies. Testing that involves doing (for example, constructing a circuit board that works when it is plugged in) is often a more effective means of assessment than a standardized test, but such testing is more difficult to incorporate into a standardized statewide reporting system. Consequently, adopting performance-based policies must strategically select programs for initial inclusion in a performance-oriented system. It may be wise, for example, to begin with programs that are subject to state licensing requirements.

Additionally, it is important not to become enamored with any one measure of outcomes. Each has flaws and, if used in isolation, is likely to promote undesirable behavior. An exclusive emphasis on program completion, for example, may promote creaming. Focusing solely on value-added may divert attention from the bottom line—successful placement and effective performance on the job. Multiple indicators of performance will help to keep the system attentive to performance broadly conceived and avoid skewing it in one narrow direction.

Finally, it is important to underscore once more the need for procedures for evaluating performance in the context of external factors and student characteristics. Learning outcomes may vary with differences in fiscal resources available to program providers. They certainly will vary with differences in the abilities and needs of program participants.

TYING PERFORMANCE TO FUNDING

The success of performance-based policies will depend in large measure on finding effective ways to tie performance to funding. While better definition and measurement of desired outcomes can improve general oversight and administration of vocational education programs, mere exhortation to excel on these measures is not likely to achieve much result. Rather, financial rewards for good performance, and possibly sanctions for poor performance, are more likely to focus attention on program performance and ways to improve it.

While tying performance to funding has a certain intuitive appeal, designing fair and effective performance-based funding arrangements is not easy. A number of important policy issues must be addressed. First, what should be the general relationship between funding and performance? Should resources be directed only to the stronger performers or should policy direct more resources to poor performers to strengthen their efforts? Second, at what level should performance be evaluated and compared—community college districts

of SDAs, colleges or community-based organizations, programs within institutions, individual courses, or individual teachers? Regardless of how performance is measured, to whom should rewards be given and should any constraints be placed on the forms such rewards take? Third, who should administer performance-based systems—a state coordinating board, particular agencies within the state, local boards or SDAs, or individual institutions? How much discretion should the administrators of these policies have over how performance is defined, measured, and rewarded? Fourth, what means for tying performance to funding—performance contracting or performance-based funds allocation formulas—should be encouraged and under what circumstances? What procedures will be used to determine that these procedures are designed fairly and with adequate technical expertise?

To help answer these questions, we reviewed recent experiences with two types of approaches to linking performance and funding: performance contracting and performance-based funding formulas. Our findings will be briefly summarized here (Hoachlander, Choy, & Brown, 1989).

Performance Contracting

Although tried from time to time in education, performance contracting for instructional services has never become popular. In contrast, performance contracting has become a central feature of JTPA and other employment training programs. The California Employment Training Panel (ETP), charged with administering the state's fifty-five million dollar program for retraining displaced workers, relies entirely on performance contracts with community colleges, proprietary schools, and community-based organizations. The training agency is not paid for training a client unless the person is placed in an unsubsidized job for at least ninety days. We examined both JTPA and ETP to learn more about their experiences with performance contracting.

Performance Contracting Under JTPA

Performance has been the watchword of JTPA from its outset. Replacing the much maligned Comprehensive Employment Training Act legislation in 1982, JTPA was billed as a no-nonsense, outcome-driven training program for the disadvantaged—a first of its kind, efficiently funded, and reliant on the increased involvement of the private sector to keep it focused on the bottom line. Curiously, while JTPA established a system of performance standards and rewards based on results, performance contracting per se was never

mentioned in the act. Nevertheless, during the last three or four years, performance contracting has been widely adopted throughout the system and has become the primary contractual tool in many Service Delivery Areas (SDAs), the basic organizing unit of JTPA. To learn more about the experience of JTPA with performance contracting, we visited several SDAs around the country. We also commissioned a paper and a small survey of SDAs to determine how widely performance contracting was used, why, and with what results.

While JTPA established performance standards as the primary means of accountability for the program, it left states and localities a great deal of discretion in implementing this system. SDAs were free to organize and operate their own training programs "in-house," or they could make arrangements with other local agencies and institutions such as community-based organizations, community colleges, and proprietary schools. If SDAs decided to contract out training, there were no requirements that they do so in any particular way. Regardless of how they chose to organize the training, however, the SDAs would be held accountable to measures of placement, welfare reduction, cost per placement, and average wage at placement. Although performance contracting is a natural extension of accountability from the SDA to its agents, it was by no means an inevitable development. Nor was it required anywhere by law or regulations.

It is, therefore, testimony to the appeal of performance contracting that this practice has swept through what, from an operational perspective, is a rather decentralized, diverse system. A recent survey of one-hundred SDAs in twelve states found that over eighty percent of the SDAs were using performance contracting—procedures that tie all or a part of payments for training to achieving specified levels of performance on negotiated measures of performance (Butler, 1988). Why has performance contracting become so popular in JTPA? For what is it used? What are its pros and cons?

SDA officials who have adopted performance contracting typically offer two main reasons. First, performance contracting is a management tool. Fifty-eight percent of the administrators surveyed by Erik Butler (1988) cited better accountability as one of the reasons they used performance contracting. It directly translates the performance standards by which the SDA is held accountable into measures for evaluating and compensating whoever delivers the training services. Performance contracting, therefore, assures the SDA that its contractors understand and will work to achieve the same objectives that will determine the success or failure of the SDA.

Second, performance contracting under JTPA has been an ideal means for *appearing* to minimize administrative costs, and almost sixty percent of SDA administrators cited this as one of their reasons for opting for performance contracting. JTPA places a limit of fifteen percent on the percentage of JTPA funds that may be used for administration. SDAs have struggled to stay within this limit and have found it particularly difficult to achieve when programs are run and administered in-house. Through performance contracting, SDAs have in effect been able to transfer some of the costs of program administration to their contractors and bury this in the performance contract. The entire cost of the performance contract may be counted as training services and, therefore, is not subject to the fifteen percent limit. It is possible that there is some real reduction in administrative costs from performance contracting. By relying on existing community-based organizations, community colleges, and other local training providers, an SDA avoids recreating and duplicating services and the administration of these services that must inevitably accompany them. It is impossible to tell, however, how much of the reduction in administration produced by performance contracting is real rather than apparent.

Interestingly, only forty percent of the SDA administrators said that better training was one of the benefits of performance contracting, and only thirty-seven percent cited better placement—one of the primary performance measures by which the programs are held accountable. Only six percent cited better recruitment, which is not a surprising result since most of the SDAs retain major responsibility of intake and determining eligibility, functions that they are in good positions to perform. From our review and site visits, however, there is as yet little hard evidence that performance contracting improves the quality of training or its effectiveness. It well may, but no one really knows.

Over eighty percent of the SDA surveyed by Butler said they had one or more performance contracts. Seventy-three percent said they had performance contracts for classroom-based vocational training, fifty-three percent for pre-employment/work maturity skill training, fifty percent for basic education, forty-eight percent for on-the-job training, and thirty-two percent for job search assistance.

SDAs, then, appear to be most comfortable with performance contracting when it is used to obtain classroom-based vocational training, probably because these kinds of services are the easiest to obtain through other service providers. Classroom programs in community colleges and community-based programs are long established. It makes little sense for SDAs to duplicate these.

As popular as performance contracting has become in JTPA, SDA administrators acknowledge that it is not free of problems. There are three frequently cited drawbacks to performance contracting: (1) creaming, (2) excessive concern with numbers, and (3) the timing and level of reimbursements.

From the very start of JTPA, the new emphasis on performance raised widespread concerns about incentives to screen out clients who were the least likely to succeed in training programs and to admit only those who were the most likely to enable programs to accomplish their performance objectives. There are undoubtedly incentives to cream, and there is some evidence that JTPA may overstress quick results, inexpensive placements, and the selection of clients most likely to benefit from training (Grinker Associates, Inc., 1986). However, given the eligibility requirements of JTPA, concerns about creaming may be overemphasized. Moreover, it is not performance contracting per se that leads to creaming but, rather, the way the performance objectives are defined. It is easy to imagine how one could structure a performance contract to ensure that more difficult-to-train, harder-to-place clients were admitted to training programs. Performance contracting can be a means to many ends.

Defining the ends, then, is the more serious issue, and on this score performance contracting in JTPA raises some more troublesome problems. SDA administrators cite a tendency to become preoccupied with the numbers, churning people through the system to meet placement performance standards with inadequate attention to quality of programs and longer term benefits for participants. That JTPA places high percentages of its clients in jobs is indisputable. Less is known, however, about how long they last, how effectively they have been trained, or how generalizable the skills they acquire in JTPA are to other jobs they may encounter during their working lives. Moreover, with the exception of youth programs where competencies have figured prominently in JTPA, programs have generally ignored developing measures of value-added. This failure partly reflects the difficulty of devising good competency-based training curricula, but it also reflects a resistance to divert attention from "the bottom line"—employment.

Finally, performance contracting sometimes creates high risks and serious cash flow problems for agencies that are not in strong positions to cope with such strains. Since part or all of the payments are not received until after clients complete programs and are placed, service providers must front a considerable amount of expenses. Moreover, they do so with considerable risk that unless they meet the performance objectives, they may not be paid at all. It is, of course, such prospects that lend performance contracting its power,

that is, the costs of not performing are high and the benefits of success are great. Nevertheless, the all or nothing features of some performance contracting may dissuade effective trainers from participating in JTPA and may encourage those who do participate to adhere mindlessly to performance criteria, cream, or otherwise dilute the quality of their programs.[1]

Performance Contracting in the California Employment Training Panel

The California Legislature created the Employment Training Panel (ETP) in 1983 in response to concerns that the changing world economy and the introduction of new technologies were causing workers to lose their jobs. ETP focuses on the specific needs of the economy and supports training and retraining that improves productivity and competitiveness and promotes security of employment for California workers. Up to fifty-five million dollars a year can be allocated to training programs operated by employers or public or private training agencies.

Several features distinguish the ETP program from other employment training programs. First, the ETP program uses fixed fee performance contracts exclusively. ETP reimburses the training agency at a fixed amount per trainee if and only if the trainee successfully completes the training and is employed by a single employer for ninety days. There are no partial reimbursements for trainees who drop out of training or who do not get and keep jobs.

Second, training is linked to specific jobs rather than to general labor market needs. Proposals for contracts may be initiated directly by an employer or a group of employers, by a training agency, or by a master contractor—an organization such as the State Department of Education paid to provide marketing and outreach services. Proposals must include, among other things, a list of employers who will hire successful completers and signed agreements that they will participate in the development and operation of the program; a statement of the need for and purpose of the training; a description of the skills required for the jobs; a schedule and plan for conducting the training; and the fee that will be paid.

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[1]Not all JTPA contracts operate on an "all or nothing" basis. Some SDAs pay contractors at different stages of performance. For example, they may pay contractors fifteen percent of their fee upon meeting recruitment goals, thirty percent for retaining trainees until the the end of the program, thirty percent for initial placement, and twenty percent for job retention.

Third, the program is limited to individuals who are receiving (or have recently exhausted) unemployment benefits or who are in danger of being laid off and becoming unemployment insurance recipients. In other words, individuals who have never been employed or who have not been employed long enough to earn unemployment benefits are not eligible. This limit on participation is the result of the funding source—a surtax on employer payments to the unemployment insurance fund.

For programs training unemployed workers, contractors are responsible for recruiting trainees and are free to select whomever they wish from the eligible pool. They work with the Employment Development Department offices to identify potential participants and do direct mail and newspaper advertising. For programs involving retraining of workers in danger of losing their jobs, the employers (and unions, sometimes) select participants from among their own workers. Program regulations require contractors to describe in their plans efforts they will make to recruit women, minorities, the disabled, and veterans.

The ETP program started slowly. During the first two years of full operation, the number of individuals who had actually completed training and had been employed for ninety days was only 8.6 percent of what was planned (Legislative Analyst Office, 1986, p. 20). As a result, a large proportion of the appropriated funds remained unspent. As experience with the program grew and administrative deficiencies were corrected, the level of activity increased. In 1986-87, placements were sixty-five percent of what was planned. In addition, demand for ETP assistance exceeded the supply of available funds for the first time. The average cost per person was $2,061 (Employment Training Panel, 1987, p. 14).

An evaluation conducted by the Training Research Corporation for the ETP concluded that the ETP program efficiently moved unemployed workers into new jobs and enhanced the productivity of potentially displaced workers (Moore, Wilms, & Bolus, 1988). It found that the program had a positive effect on earnings and that it reduced unemployment for participants.

The major criticism that has been levied against the ETP program is that the ETP has subsidized normal employer training costs—in other words, paid for retraining of employees who were not truly in danger of being laid off if ETP had not provided training funds. The Legislative Analyst's report (1986), which made this charge, came to this conclusion after interviewing employers. It cited as an example an aerospace firm with a contract to train machinists in the use of computer-controlled machining equipment. Because there was a shortage of skilled machinists, the evaluators were very skeptical of the claim

that the firm would have laid off its experienced machinists and attempted to hire even more experienced ones if they had not received ETP funds. They thought it much more likely that the firm would have provided training at its own expense to the machinists already in its employ.

Issues of the appropriate use of public funds aside, as an experiment in performance contracting, the ETP program has been successful. What follows are some general observations about what has made performance contracting work in the ETP program and a discussion of the implications for performance contracting in postsecondary vocational education. These observations are based on interviews with state-level administrators of the ETP program and site visits to four contractors—three community colleges and one regional occupational program with a large adult education program.[2]

Performance contracting is risky, especially in the case of the ETP program where the criterion for success is so strict. Although it has not worked well for all contractors, many have been able to make it work. Described below are factors that have contributed to ETP's being able to attract contractors and contractors being able to operate successful programs.

- *Clear goals and measurable outcomes*

  The goals of the ETP program are clear: To place unemployed workers in good jobs with long-term career potential and to keep employed workers whose jobs are threatened because they lack the necessary skills in their jobs. No other outcome is acceptable. The ETP program is narrowly focused on teaching job specific skills that have been identified as important by employers who are committed to hiring (or retaining) the completers. Contractors are expected to teach trainees only those skills. Expectations are very clearly spelled out—the proposal for funding must include a schedule for the training and a plan for conducting the training that describes what will be learned and how. Contractors accept placement and retention on the job for ninety days as the appropriate criterion for success and are willing to participate on those terms. If the goals were less specific, or if there were multiple goals with unclear priorities, or if the measures of success were less clearly related to the goals, getting contractors to participate would be much harder.

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[2]Proprietary schools have not played an important role in the ETP program, and none currently have programs.

Data collection on outcomes is easily accomplished. Contractors need only keep track of placements and verify with the employers that the trainees are still employed in the same place ninety days later. None of those interviewed found data collection a problem. Only very rarely did a trainee "disappear." On a random basis, employment status is verified at the state level by using unemployment insurance records.

- *Involvement of employers*

The employers who will eventually hire the completers must be identified before the contract is awarded. The employers not only are allowed, but are *required*, to assist in the development and operation of the program. Employer involvement goes beyond the advisory committees that typically meet once or twice a year to provide advice on vocational education programs. In the ETP program, the employer shares decision making authority with the training agency. With such a structure, there should be no questions at the end of the program as to whether or not the trainees have the appropriate skills. This makes placement more certain and participation much less risky for contractors.

The training contractors that have been the most successful devote a great deal of time and energy to identifying employers and developing good relationships with them, and they believe strongly that this effort has contributed to their success. While some contracts involve only one large employer, many involve groups of small or medium sized employers. For example, one community college we visited conducted a computer-assisted design course for two-hundred architectural firms. Many word processing and office automation programs also involve a large number of small employers.

- *Nature of the population served*

As indicated above, participation in the ETP program is limited to individuals who are receiving (or who have recently exhausted) unemployment benefits or who are in danger of being laid off and becoming unemployment insurance beneficiaries. In other words, only individuals who have been employed or who have been employed long enough to earn unemployment benefits are eligible. These individuals have already demonstrated that they have general job readiness skills—in fact, many of them are already employed—and are thus much lower risks on average than the populations typically served by job training or vocational education programs. Program directors interviewed who had experience with JTPA training

programs remarked on the enormous difference in the job readiness of the populations served.

One community college provided an example of a "low risk" group served. The college developed a seven-month retraining program for workers laid off when an auto plant closed. The program trained participants in microwave technology, and was successful largely because the trainees were the "cream of the crop." They were all in their thirties or forties, they were secure in their training situation because they had received severance pay, they were highly motivated to find jobs, and most had many years of work experience. In addition, the job market for microwave technicians was good. As a result, sixteen out of the seventeen persons enrolled were placed and retained in jobs for at least ninety days.

All the contractors we visited screen prospective trainees for new-hire programs very carefully. They test them for basic reading and math skills and interview them to assess their ability to complete the program and their employability. Only those expected to succeed are accepted, and poor performers are terminated if necessary. The programs cannot afford to take chances or waste resources on trainees who will obviously not be successful. The contractors also reject candidates with too many skills on the grounds that they are likely to leave the program for a job before the end. If this were to happen the contractor would not be paid for that person.

Program regulations require contractors to describe in their plans what efforts they will make to recruit women, minorities, the disabled, and veterans. These plans are evaluated during the selection process; however, once a contract has been awarded, the contractor chooses the participants.

- *Focus on short programs*

Although the law permits training programs to last as long as eighteen months, the average program for retraining workers is only 234 hours, and the average program for the unemployed is only 503 hours (only about three months for an eight-hour per day program). One reason that contractors have preferred shorter programs is that it is easier to get employers to keep their commitments. Training agencies cited instances of employers who were willing at the start to hire trainees, but who changed their minds before the end of the training period, forcing the agency to find other placements.

- *Emphasis on retraining*

  Programs for retraining workers already on the job are much less risky than programs for the unemployed. A worker already on the job who has showed interest by agreeing to participate is very likely to complete the training and remain on the job for ninety days. The mix of training for the unemployed versus retraining has shifted during the life of the ETP program. Whereas fifty-five to sixty percent of the participants were unemployed in 1983, eighty-five to ninety percent of the participants are now workers being retrained. Of the individual training projects approved by the ETP as of June 30, 1987, only twenty-seven percent were for the unemployed, compared to fifty-three percent for retraining. Twenty percent included both.

  The emphasis on retraining is not entirely attributable to the lower risk, however. Also contributing is the difficulty experienced by many contractors in recruiting trainees for new-hire programs. Among the causes of this problem, which has existed since the inception of the ETP program, are low unemployment rates and the eligibility requirement. Because only individuals who are receiving unemployment insurance (or have recently exhausted their benefits) are eligible to participate, ETP's executive director estimates that only one-quarter to one-third of the unemployed are eligible for new-hire programs.

- *Commitment of resources to placement and support services*

  Each of the training agencies visited had made a heavy commitment of resources to placement. There was no assumption that simply teaching workers the right skills would guarantee them jobs. Rather, it was taken for granted that people need help in locating opportunities and interviewing for jobs, and full-time counselors, or "employment specialists," were hired to provide this help. In two of the programs, the contractors conducted classes in job search skills, helped trainees with their resumes, and sponsored job clubs. In addition, the employment specialists followed up after placement to make sure everything was going smoothly.

  One community college visited achieved a one-hundred percent placement rate for one new-hire contract, and claims to have the best contract results of any training agency in the state. The director attributes this record to the resources they invest in support services and placement. They operate on the principle that the more attention paid to students, the better the placement rate will be. Attendance at class is mandatory, and if a trainee misses a class, a staff person calls the next day to find

out why. Saturday tutorial sessions are conducted for students who have missed classes or need extra help. For new-hire students, the college provides extensive support during the job search process, including instruction in interview skills, help in getting interviews, and videotapes of real interviews. College resources such as child care services and libraries are made available to ETP participants. The director attaches great importance to the "personal touch," and believes that it makes the difference between a sixty percent and one-hundred percent placement rate.

Implications for Policy

There is good evidence that performance contracting has worked well in a variety of employment training settings. It is by no means clear, however, that it could easily be applied to postsecondary vocational education programs. There are important differences between JTPA/ETP programs and postsecondary vocational education that would make it difficult to institute performance contracting as formulated for JTPA or ETP. First, the employment training programs typically have a much narrower focus than vocational education. JTPA and ETP trainees are taught mainly those skills needed to obtain or retain a certain job. In contrast, students in postsecondary vocational education programs have to meet general education requirements. They are encouraged to explore alternatives and even to change their majors if desired. Therefore, while placement as the criterion for success is easily accepted for JTPA and ETP programs, performance contracts for vocational education would have to have multiple criteria, and what these criteria should be and how they should be weighted would be hotly debated.

Second, the target populations are different. While the JTPA and ETP serve different populations, both groups are fairly homogeneous. JTPA serves only low-income youth and adults. The ETP program serves only individuals who have held jobs or who are in danger of losing them. In addition, contractors can be selective about who they admit to training. Postsecondary vocational education, on the other hand, serves a much more heterogeneous population, including a large number of students who enter directly from high school and have never held a job. Most postsecondary vocational educational institutions are committed to providing access to all students who have a chance of succeeding, and make special efforts to include the disadvantaged and other students with special needs. Performance contracting, at least as formulated for ETP, would provide a disincentive to enroll the disadvantaged and might lead to creaming.

Third, employers (and sometimes unions) work directly with ETP staff to select trainers, trainees, curriculum, method of training, and standards for successful completion. In vocational education programs, employers are normally involved only as members of an advisory committee that meets a few times a year. In addition, vocational education curricula are not usually designed to meet the needs of individual employers. Indeed, many programs resist catering to the needs of individual employers and try instead to prepare students for a more general labor market.

Despite these differences, there are some important lessons to be learned from the experiences of the JTPA and ETP, and there do seem to be some opportunities for at least limited use of performance contracting in postsecondary vocational education. One possibility would be not to make all vocational programs subject to performance contracting, but to limit it to certain ones that lend themselves to placement as the criterion for success. For example, vocational education programs that lead to state licenses may be good candidates for performance contracting. Similarly, some vocational education programs in community colleges such as office automation and computer assisted design are sometimes aimed primarily at retraining, and these may also be appropriate for performance contracting.

While it would not be appropriate to build performance contracts around placement alone in vocational education, it is certainly possible to envision other types of performance contracts. Possibilities include contracts with multiple measures of performance, partial payments for meeting certain levels of achievement, or increased payments for serving disadvantaged students.

Performance contracting could also be implemented so that an institution's performance is measured rather than a single program's. Such an approach would make it feasible for institutions to undertake risky programs along with ones that are highly likely to be successful.

Performance-Based Funds Allocation Formulas

In recent years, mathematical formulas have become increasingly popular for distributing general purpose and categorical funds to eligible recipients. The Carl D. Perkins Vocational Education Act specifies the formula to be used to allocate the handicapped and disadvantaged setasides. While it does not require funds affected by other parts of the legislation to be distributed by formula, many states have adopted formulas of their own.

Additionally, a few states use formulas to allocate state categorical aid for vocational education.

These formulas typically distribute funds based on various measures of program inputs. Only a very few states include output measures in their funds distribution formulas. Florida, for example, has established minimum placement standards for continued funding. Secondary vocational education programs that do not place at least seventy percent of their students are not eligible for refunding. Tennessee bases five percent of its state aid for higher education on six measures of performance. Connecticut recently became the first state to allot general aid to school districts based partly on deficiencies in student test scores (Rothman, 1987). Unlike performance-based funding in Tennessee, Connecticut's program directs more money to those with the lowest scores.

To learn more about actual experiences with performance-based allocation systems, we examined the history of Tennessee's postsecondary performance funding system. This system, which began in 1979 and had been in the planning stages for almost seven years prior to that, is by far the oldest performance-based funds distribution system in education. Thus, with almost ten years of experience in operating this system, Tennessee seemed a likely source of useful information on the prospects of adapting such an approach to vocational education.

Performance-Based Funding in Higher Education in Tennessee

In 1979, The Tennessee Higher Education Commission (THEC) began implementing a new approach to funding the state's public colleges and universities. At the outset, performance funding was limited to two percent of general expenditures, but, henceforth, up to five percent of an institution's annual state allocation for instruction would be awarded based on performance. Tennessee has adopted performance standards in six areas: (1) program accreditation, (2) major filed assessment, (3) undergraduate general education outcomes, (4) alumni satisfaction surveys, (5) corrective measures, and (6) development and piloting of assessment instruments.[3]

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[3]The number, content, and score of the standards have changed over time. Initially, performance funding standards were somewhat more process-oriented, encouraging institutions to implement the planning and assessment procedures that would make performance funding possible. As these procedures were implemented, standards became more outcome-oriented. For an excellent description of the history of performance funding in Tennessee, see Trudy W. Banta and Homer S. Fisher, "Performance Funding: Tennessee's Experiment," in J. Folger (Ed.), *Financial Incentives for Academic Quality: New Directions for Higher Education, No. 48.* San Francisco, CA: Jossey-Bass, December, 1984, pp. 29-41.

In July, 1988, we visited the state capital and three local colleges and universities. We wanted to know more about how the system worked, what kinds of problems had been encountered, what solutions had been attempted, and how state and local personnel perceived the effectiveness of the performance-based funding.

In Tennessee, higher education institutions may earn a supplement to their annual budget of up to five percent of their regular operating budget, based on how they score on standards developed in six areas of institutional performance. Out of a possible total of one-hundred and ten points, each institution may earn twenty points for program accreditation, thirty points for major field assessment, twenty points for undergraduate general education outcomes, fifteen points for alumni satisfaction surveys, fifteen points for corrective measures, and ten points for developing and piloting assessment instruments. An institution scoring a full one-hundred and ten points would receive the entire five percent supplement. The supplement is prorated for institutions scoring fewer than one-hundred and ten points. For example, a score of eighty would entitle an institution to 72.7 percent (80 ÷ 110 = .727) of the five percent supplement; a score of fifty-five would earn fifty percent (55 ÷ 110 = .50) of the five percent supplement. In practice, only a few institutions have received the full five percent, and all have received something.

Although participation in the system is voluntary, all eligible public universities, community colleges, and technical institutes in Tennessee participate. To not participate would invite embarrassing questions from local governing boards, as well as the press and public at large. Hence, institutions dissatisfied with the system channel their energies into modifying the performance standards in ways they deem more appropriate, rather than opting out altogether.

THEC is responsible for developing the performance standards and does so in consultation with local institutions. Local institutions enjoy some discretion in implementing certain aspects of the standards and performance-measurement process, but local administrative decisions of this type require approval by the local governing board. In some instances, approval be the state board or the THEC staff is required. Additionally, the Executive Director of THEC may, for good and reasonable cause and with concurrence of the state governing board, authorize modifications to the standards. Such modifications, however, must be applied uniformly to all institutions.

Institutions receive a score in each of the six standard areas. The procedures for computing this score are in some instances simple and quick. In some areas, however, the procedures are tedious and differ for different types of postsecondary institutions.

Scores for program accreditation are easy to determine. To qualify for a minimum score of ten points, at least sixty-five percent of an institution's programs eligible for accreditation must in fact be accredited. An institution will earn thirteen points if from seventy-four to eighty-one percent of its eligible programs are accredited, fifteen points if from eighty-two to eighty-five percent are accredited, and an additional point for each additional three percent gain in the percentage of eligible programs accredited.

In contrast to the procedures for determining accreditation points, the procedures for scoring the major field assessment are quite complex. Procedures are different for universities and two-year institutions. Of a maximum of thirty points for this standard, a maximum of twenty points may be earned based on the performance of graduating students on approved undergraduate major field tests, and a maximum of ten points may be earned based on an external review of masters' programs. Scores for performance of graduating students are based both on the percentage of students scoring above the national mean and on the extent of improvement over previous student performance. The external review of masters' programs is performed by a qualified consultant, approved by the THEC staff who determines whether or not the institution has met objective standards established by the Tennessee Council of Graduate Schools in each of ten categories, including screening and supervision of students, core curriculum, comprehensive examination, and research.

For the two-year colleges, scoring for the major field standard carries a maximum of ten points for student performance relative to the national mean and the extent of improvement over the previous year's scores in programs leading to a license or certificate; ten points for similar performance in other major fields; and ten points for placement. With respect to placement, a program is considered successful if it achieves a placement rate of seventy-five percent or better in fields related to training. To receive any points under this standard, at least sixty percent of a two-year institution's programs must have achieved this seventy-five percent placement rate, in which case five points are awarded. Institutions with from 70 to 79.9 percent of its programs achieving this rate receive seven points; from 80 to 89.9 percent, nine points; and ten points when over ninety percent of its programs achieve this seventy-five percent placement rate.

The standards for undergraduate general education outcomes award a maximum of twenty points based on an institution's mean value-added between entry and exit scores on the ACT COMP test and on the mean score of its students relative to national norms. All baccalaureate and associate level students are tested. If the number of students tested exceeds fifteen-hundred, the institution may test a statistically representative sample of fifteen-hundred students.

The maximum of fifteen points awarded for alumni satisfaction is based on surveys conducted every other year of all undergraduate alumni who graduated two years before the year in which the survey is conducted. Institutions are required to use an "evaluative survey," which is defined as one yielding quantifiable indices of satisfaction with instructional programs and academic support services. Institutions are free to design their own survey instruments, but these must be approved by THEC staff and must remain in force for three successive surveys. Points are automatically deducted for response rates of less than thirty percent.

The fifth set of standards awards a maximum of fifteen points for evidence that an institution is taking corrective measures to address deficiencies in performance on the second, third, and fourth standard areas. Finally, the sixth standard area awards ten points as an incentive to an institution or group of institutions to develop and pilot tests and other assessment tools that have not yet been approved for use in the performance funding system. Five points are awarded for development and five points for piloting and testing.

In sum, Tennessee's performance standards employ measures that vary considerably in their degree of objectivity, ease of measurement, and cost of collecting, maintaining, and reporting. The regulations explaining the procedures and definitions of relevant terms, while relatively easy to follow, nevertheless fill thirty-three single spaced pages. Considerable effort by both state and local staff has been devoted to modifying and refining these provisions over the state's nine year history with performance-based funding.

From 1980 to 1988, Tennessee has provided an additional eighty-four million dollars to its public higher education institutions. Additionally, considerable staff time at both the state and local levels has been devoted to designing, implementing, and refining the funding system. What evidence is there that all of this effort has had any impact?

Several local officials indicated to us that they were initially skeptical about the desirability of the system. Performance funding was seen as an irritant that many local ad-

ministrators and faculty wished would go away. As it became apparent that the state was serious about continuing to implement the program, and as the comparative indicators of individual institutional performance became more widely known through the press, local institutions began to take performance funding more seriously. Enrollment declines at one of the lowest scoring institutions, for example, forced this campus to look seriously at what it was doing.

The local officials we interviewed all reported positive effects. One community college reported that performance funding forced it, for the first time, to systematically examine what happened to its students after graduation and to find out how they assessed their educational experience at the college. As the result of student follow-up prompted by performance-based funding, this college devoted greater resources to student services, especially financial aid administration. It inspired efforts to seek additional community support for offering "honor scholarships" to attract more top students and keep them enrolled until graduation. The college also undertook a revamping of its allied health curriculum and testing. It cut down its student/teacher ratio and introduced new health registry exams. As a result, the rate of attrition dropped fifty percent in its nursing program.

At one of the state universities, performance funding led to an institutional self-examination that identified needs to improve admissions, advising, and student services. It sparked a reassessment of the curriculum, producing a new experimental core curriculum in which the performance of students was systematically evaluated with that of students in the regular curriculum. The college also accelerated efforts to increase its accreditation performance.

Another university also reported making major changes in advising and other student services as a result of student follow-up surveys required by performance-based funding. It greatly increased its efforts to assess the capabilities of the students at the time of admission and their progress over time.

Statewide, officials cite three major improvements in higher education: (1) a marked increase in the percentage of accreditable programs that are actually accredited; (2) an increase in the percentage of students in licensed and certified fields passing their professional examinations with scores exceeding the national norm; and (3) a steady rise in COMP scores. While it is impossible to unequivocally attribute these results to performance funding, there are no other obvious explanations. A conventional alternative explanation, that is, creaming, seems unlikely. As one local administrator told us when we

inquired about incentives to cream, "When ninety-five percent of my money is still driven by FTE and only five percent by performance, why would I give up $95 to make $5? I will still take any student who wants to enroll." Because it affects a relatively small percentage of total funding, performance funding in Tennessee operates at the margins and involves much lower risks than the all or nothing consequences of performance contracting. Hence, there are no strong incentives to admit only students who are likely to perform well.

Despite these positive signs, performance funding in Tennessee has evoked its share of criticism. At the outset, there was widespread resistance and apprehension on the part of many local administrators and faculty members who maintained that educational outcomes were not definable and who viewed performance funding as creating unacceptable degrees of state intervention in campus affairs. Publicly releasing institutional scores worried many who feared, with some justification, that false and misleading comparisons would be made among institutions. Others argued that performance funding directed additional resources to institutions least in need of help. Still others maintained that standards could not be implemented fairly because data was not comparable across institutions and because differences among institutions such as the mix of accredited and non-accredited programs would bias performance scores.

While state staff have resolutely stuck to performance funding, they also have listened carefully to local criticism, actively sought input and feedback, and have responded with modifications to the system. Thus, complaints that the system placed too much emphasis on accreditation led to a reduction in the number of points awarded for this standard. Efforts have been made to reduce the paperwork associated with major field assessment and undergraduate general education outcomes. Annual requirements for surveying alumni were shifted to biennial requirements in response to concerns about the cost of compliance, and state staff have encouraged networking and other means for sharing assessment instruments to reduce the costs of student testing. In short, THEC has viewed performance funding as a flexible system, subject to change and refinement as the need arises. There are no illusions that the system is perfect, but there are strong feelings that despite its imperfections performance funding has improved higher education in Tennessee.

Tennessee's experience illustrates that if expectations for performance funding are not set unrealistically high, important improvements can be accomplished. When performance funding first started in Tennessee, no institution had a systematic process for internal assessment of institutional objectives and performance; now all do. Without question,

the system has focused attention on standards, assessment, and performance—a prerequisite for any institution or group of professionals seeking self-improvement and self-regulation. Performance funding, however, has its limits, especially if it affects only five percent or less of an institution's finances. For administrators who are aggressively seeking change and improvement, program funding provides useful leverage. However, program funding is not likely to induce change in those who remain steadfastly resistant. It is possible to comply with performance funding and obtain some additional funds without really improving performance. Additionally, performance funding inevitably leads to some reduction in local academic autonomy and an increase in bureaucracy as pressures mount for a more uniform system of definitions and measurement that will reassure all the participants that they are being treated fairly.

Policy Implications

Tennessee's experience with performance-based funding offers a number of important lessons for efforts to shape a more outcome-oriented approach to state policy for postsecondary vocational education. First, not only is it possible to fashion a performance funding system with a relatively small amount of money, but, also, the success of the system may well *depend* on the performance incentive being relatively small. Performance-based funding, as practiced in Tennessee, was designed to improve performance at the margins, not radically transform the higher education system by introducing possibly undesirable incentives. Thus, because the financing of postsecondary education remained largely enrollment driven, incentives to cream and otherwise skew operations artificially in response to performance standards were greatly reduced. Moreover, the fact that performance funding allocated supplemental money rather than reallocated existing dollars helped to reduce opposition and secure constructive cooperation.

Second, a performance funding system is more likely to be successful if it does not attempt to bypass or ignore existing institutional arrangements. While still exercising strong leadership at the state level, Tennessee continuously involved local administrators and faculty in the design and modification of all aspects of performance funding. Additionally, local administrators and faculty members were given substantial discretion in determining how best to implement standards, and there were virtually no strings on how institutions could use the funds they earned through performance funding. Participation in performance funding was voluntary from the beginning. While pressures from peer institutions, the press, and consumers would have made it difficult for any institution not to

participate, institutions were always free to opt out if they felt they were treated unfairly or that the required effort was not worth the extra money.

Third, financial incentives that stop formally at the institutional level can be effective. It is not necessary that the system establish specific procedures for using financial incentives to motivate individual departments, programs, or personnel. Leaving institutions free to determine how best to use the rewards of performance funding to motivate particular individuals or groups of individuals worked in Tennessee, especially when there were local administrators and faculty members who were able to use performance funding as leverage for their own agendas for improvement.

Fourth, including measures of year-to-year improvement and value-added in performance funding eliminates the problem that such systems reward only the highest performing institutions that may be the least in need of additional resources. Low performing institutions could and did receive additional money under performance funding in Tennessee, but only if they did, in fact, show improvement. Such an approach is probably superior to systems that simply target more resources on low performers, with no attention to whether the additional funding leads to increases in performance.

Fifth, designing and operating performance funding systems requires a substantial commitment of resources over an extended period of time. Tennessee began developing its performance funding system about seven years before its initial implementation. Once implemented, about four years passed before most local institutions began to take performance funding seriously and more fully recognized its potential for improving their own operations. Even as the system was accepted and more widely recognized as beneficial, ongoing needs to evaluate and modify the system required ongoing staff time at both the state and local level. Because of the extended period of time required from design to implementation to acceptance and further modification, continuity and strength of leadership figured prominently in the success of the system. In this respect, performance funding benefited from the strong support of former Governor Lamar Alexander, who led major efforts to strengthen accountability at all levels of education and who, later, as President of the University of Tennessee, continued to champion the system. Additionally, leadership of THEC changed only once over the eighteen years spanning development of performance funding to the present, and both executive directors were strong advocates of performance funding.

Sixth, incorporating multiple measures of performance increases the credibility and acceptability of performance funding. By rewarding institutions for performance on six sets of standards, and by using multiple measures within several of these standards, Tennessee avoided the criticism that the system was biased in favor of institutions that happened to do better on an arbitrarily narrow selection of measures. While opting for multiple measures inevitably increased the complexity of performance funding, as well as the costs of collecting and reporting data, it nevertheless better reflected the multiple goals of postsecondary education and the divergent opinions about how one should measure educational performance.

Finally, although Tennessee sought to preserve local flexibility, centralized efforts at the state level to achieve some uniformity were necessary. When performance is linked to funding, even a relatively small amount, the procedures require a set of measures that all can regard as fair. It is impossible, therefore, to let everyone devise their own individual systems for measuring and rewarding performance.

IMPROVING STATE-LEVEL INFORMATION ON PERFORMANCE

While there is growing evidence that appropriate performance criteria can be defined, measured, and linked to funding, obtaining accurate, timely, inexpensive data has posed major problems. Employment training programs, because they work with smaller numbers of clients than vocational education and because they have limited follow-up to relatively short periods following program completion, have successfully collected data on placement. Large scale, longer term efforts at tracing the labor market outcomes of participants in either postsecondary vocational education or employment training have not been successful.

In California, as in most states, little has been done to systematically collect information on competency-based learning outcomes, although information on completers of vocational education programs has been successfully collected at the secondary and postsecondary levels. Except for information on completers, obtaining data on learning outcomes will require a major developmental effort, well beyond the scope of this paper. There are, however, some possibilities for significantly and rather inexpensively improving state data on labor market outcomes.

The Condition of Follow-up Information

To evaluate employment training and vocational education programs in terms of labor market outcomes, one would ideally like to have data on many of these outcomes over an extended period of time (at least for a year after participation in a program and preferably for five years or more). In practice, a large scale follow-up of the labor market experience of program participants has been riddled with problems. The attempt by the now defunct Vocational Education Data System (VEDS) to require annual universal follow-up of program completers in vocational education failed dismally. Intended to determine employment status six months after program completion (limited to placement data rather than information on hourly wage rates or earnings), the VEDS follow-up effort, which relied mainly on mail surveys, typically produced information on no more than twenty-five percent of the completers, rendering the data useless. Moreover, even had response rates been acceptable, the follow-up effort would have yielded no information on the longer term labor market experience of vocational education students.

Much better and more comprehensive follow-up information has been generated by several national longitudinal studies such as the National Longitudinal Study of the Senior Class of 1972, NLS Youth, and High School and Beyond. These large national samples achieve uniformity in definitions and measurement methodology, and they have obtained excellent response rates. They follow participants over many years, permitting assessments of the long term effects of participating in vocational education and employment training. As powerful as these longitudinal studies are, however, they suffer from several drawbacks.

First, they are costly and complicated. They can only be done infrequently (once about every eight years is the current norm) and require much technical expertise. While they can provide good national estimates of the aggregate import of participation in vocational education, the sample sizes are not large enough to make comparisons among different states, let alone among different institutions or programs within states. Programmatically, national differences can be analyzed for approximately twenty-five programs with the largest enrollments, far short of the several hundred different types of vocational education programs that are operated at the postsecondary level. In short, the longitudinal studies are excellent sources of data for national policy studies and might even be effectively used for policy assessments in some of the largest states where sufficient sample size can be generated. They are not, however, viable tools for ongoing accountability assessments of the effectiveness of programs at the substate or institutional level. Hence,

they cannot play a major role in performance-based policy, other than to infrequently validate less comprehensive and shorter term approaches to obtaining information on labor market outcomes.

One promising source of nearly universal information on some labor market outcomes is the data maintained by each state's unemployment insurance recordkeeping system. Several states have been experimenting with procedures that use social security numbers to merge student record information on participation in vocational education programs with the labor market data collected quarterly by the unemployment insurance system. In California, the Employment Training Panel (ETP) has been using this data to verify placement and duration of employment. While the particulars vary among states, generally all of these systems can provide information on whether a former student is employed (i.e., general placement), the industry in which the student is employed, and the student's quarterly earnings. Moreover, these individuals may be followed over time for as long as they are employed or, in the event of unemployment, for as long as they are receiving unemployment insurance.

These files offer several advantages over one-time mail follow-up surveys. First, they are inexpensive to use and will produce data on a larger percentage of students than that obtained from responses to mail surveys. Second, the data is more accurate. The information is based on actual wages paid from employers' payroll records rather than the self-report of the employee. Third, samples need not be limited to program completers. It is relatively easy to analyze a wide variety of participation and completion patterns. Fourth, extended longitudinal analysis is possible at relatively modest cost, compared to the national longitudinal surveys. While these features make the unemployment insurance data quite useful, the files do suffer from the following shortcomings:

- incomplete coverage;
- information on occupation is usually not available;
- earnings information is not adjusted for part-time employment; and
- requirements for individual student record data with social security numbers.

Coverage is problematic for two reasons. First, students who move out of state to work following participation in vocational education programs will not be included in state data files and, through the lack of any other information, they will appear not to be in the labor force. Consequently, estimates of placement will be biased downward. Second,

some classifications of workers are exempt from unemployment insurance reporting requirements, and to the extent that students go to work in these types of employment, they also will appear to be unemployed or not in the labor force.

Although the extent of coverage varies somewhat from state to state, the unemployment insurance data typically excludes certain classifications of employees who are exempt from the unemployment insurance code in each state and who are therefore ineligible to receive unemployment benefits. Self-employed workers (including sole stockholders of private corporations, sole proprietors, unpaid family workers, and independent contractors) are the largest single group of exempt employees and account for about ten percent of total employment in most states. People in the military are also exempt, and in some states there are substantial numbers of military personnel who can be counted as a percentage of total state employment. A few states exclude certain classifications of agricultural workers. Other exempt categories include workers in churches and some nonprofit organizations, students working while enrolled in school, elected officials, domestics, and some real estate brokers.

With the exception of self-employed individuals and military personnel, these exempt categories do not pose serious problems for follow-up. They typically include small numbers of workers and are not common occupations for students taking vocational education, especially at the postsecondary level.[4] Identifying students who work out of state, are self-employed, or who are enlisted in the military, however, is more important. One state which uses unemployment insurance files for follow-up conducts mail and telephone surveys to examine only those students who cannot be found in the unemployment insurance files. Since more than eighty percent of students employed soon after leaving school will show up in the in-state unemployment insurance data, the magnitude of a supplementary mail or telephone survey is considerably less than if follow-up efforts had to rely on these methods alone.[5] Consequently, with fewer students to survey, the mail and telephone efforts may be more persistent in attempting to contact former students. Moreover, as the unemployment insurance data greatly increases the minimum number of students for whom data is available, problems caused by a lack of response to the mail and telephone surveys are less severe.

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[4]In California, for example, the exempt categories other than self-employment and military personnel accounted for about 1.5 percent of total employment in 1986.

[5]A higher rate of initial matching could also be obtained if neighboring states agreed to pool their unemployment insurance data, so that students working in nearby states would be identified.

A second drawback of the unemployment insurance data is that states have generally been reluctant to require employers to identify the occupations in which their employees work. Updating occupational information on a quarterly or annual basis would be quite burdensome for employers. The employer does identify the Standard Industrial Classification (SIC) code that best reflects the nature of the business, but SIC codes are not usually a satisfactory indicator of the type of occupation in which a former student is employed. Consequently, it is difficult to use these data to determine the extent to which employment is related to a student's training. Although many states do annually survey employers to obtain an occupational profile, this data is reported in aggregated form by each employer. It is not possible to use these surveys to link a particular individual to a particular occupation. At best, one could use this aggregate data to determine a probability that, given employment in a particular SIC code, a person is employed in an occupation related to training.

A possible solution to some of these difficulties would be to ask employers to indicate *only at the time of first hiring an employee* the occupation in which the employee will initially be working. While such information would probably become outdated the longer an individual remained with the same firm, it would nevertheless provide useful information about relatedness to training at the point of entry. For policy purposes, this is the primary concern. As the employer would have to supply the information only once for each employee and since the information would be supplied at the same time other data on the employee (name, social security number, and earnings) are initially submitted, such a requirement would impose little additional reporting burden.

A third shortcoming of the unemployment insurance data is that employers report only the total earnings for each employee during a quarter. Some measure of rate of pay (e.g., hourly wage or number of hours worked) is typically not included with the data. Consequently, in comparing earnings of different individuals, it is impossible to control for differences resulting from part-time employment or employment commencing after the quarter has begun. As much part-time employment is voluntary, comparisons of program outcomes based solely on aggregate quarterly earnings will present a distorted picture.

Although requiring employers to report an additional data element to permit corrections for the lack of comparability in quarterly earnings would increase data burden, such a requirement would probably be much less burdensome than the requirement that they report occupational data. Such a variable could take one of two forms. First, employers could be

asked to report for each employee the total number of hours worked during a quarter. Second, they could be asked to report the hourly wage rate in effect during the last pay period of the quarter. As payroll systems, even for very small firms, are increasingly automated (including production of the unemployment insurance quarterly reports), requiring one or the other of these items should not cause much additional inconvenience. Hours worked and hourly wages must be routinely maintained by the payroll system for part-time and hourly employees, and imputing an hourly wage rate for salaried employees could be made straightforward, even if somewhat arbitrary.[6] Indeed, if such a requirement were limited to employers with automated payroll/reporting systems, wage rate data would probably be available for well over three-fourths of employees in most states.

The final difficulty with this approach to obtaining data on labor market outcomes is that it requires that student records be automated, based on an individual student record system, and that they contain the student's social security number for matching with unemployment insurance data files. All educational institutions must also be willing to provide this data to a central state agency, which can coordinate the matching with the state unemployment insurance files. In California, the community colleges do maintain student record systems centrally in Sacramento, permitting the data to be merged with unemployment insurance data. At the secondary level, however, there is no centralized student record data.

In short, the unemployment insurance files provide a promising low-cost approach to obtaining current, accurate, and fairly comprehensive data on some selected labor market outcomes for students participating in vocational education programs. The approach is far from perfect and would benefit from a few modifications that do not appear to be burdensome or expensive. Certainly, the information and coverage is far superior to the follow-up efforts attempted by VEDS. While this method lacks the precision and detail of the larger national longitudinal studies, it provides an economical alternative for obtaining institutional and statewide data on an annual basis. Thus, potentially good data is available on labor market outcomes for participants in postsecondary vocational education and employment training programs.

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[6]While salaried employees are often expected to work more than forty-hour workweeks, a forty-hour standard could be arbitrarily adopted for comparability purposes.

CONCLUSION

At the outset of this paper, we stated that for performance-based policy to be effective it must meet four requirements: it must be possible to define desired outcomes clearly; it must be possible to measure these outcomes accurately and efficiently; measures of performance must affect levels of funding; and useful information on outcomes must be available for consumers and policymakers. In the first four sections, we have demonstrated that it is possible to meet these four requirements. Defining and measuring program outcomes, linking them to funding, and obtaining information on outcomes for consumers and policymakers are not merely abstract, untested, academic concepts. On the contrary, these practices are present in a wide variety of vocational education and employment training activities. What, then, are the implications for crafting a performance-based approach to vocational education and employment training policy?

To begin, it is important to restate clearly the primary goal of adopting a performance-based orientation. Performance-based postsecondary vocational education and employment training policy should have as its primary aim stimulating providers to increase the knowledge and skills of participants and to improve their prospects for successful participation in the labor market. Policy should seek to achieve this goal for all participants, as well as emphasize its realization for students with special needs.

In seeking to realize this overarching goal, performance-based policy should contribute to a secondary objective—namely, focusing policy debates more on issues of outcomes and less on procedural matters. In some respects, the fact that performance-based policy creates a climate for asking hard questions about what postsecondary vocational education and employment training should be seeking to accomplish and how best to determine if these aims are met is as important as whatever measurable changes in performance can be attributed to a shift in state policy. Indeed, if state policy did nothing more than stimulate an ongoing attention to outcomes and to assessing institutional effectiveness on performance measures, it would have accomplished a great deal.

Crafting such a policy will need to heed a number of important lessons that have been learned to date. First, policy should allow localities substantial discretion to tailor performance-based policies to best fit their particular circumstances. Localities vary greatly in how they organize and deliver postsecondary vocational education and employment training. Programmatic emphases also differ, reflecting variance in regional and local labor

markets and the types of students to be served. Seeking to impose a uniform, highly specific approach to implementing performance-based policy is not likely to succeed.

Second, state policy should require the adoption of multiple definitions of performance. The state has many options as to how it defines and measures performance criteria, but it should not rely on a single set of criteria (e.g., labor market outcomes) or a single measure for such a set (e.g., placement rate). The state should develop measures of both labor market outcomes and educational outcomes and should adopt procedures for evaluating these measures for students with special needs, as well as for all other students. With respect to educational outcomes, the state should include some measures of value-added or changes in institutional performance over time so that performance is not measured simply in terms of highest achievement, but also reflects improvement by students and institutions. In this way, gains in the performance of even relatively low achieving institutions can be recognized, encouraged, and rewarded.

Third, in linking funding to performance, the state needs to consider carefully the differences between employment training and vocational education programs. Performance contracting is a more suitable funding mechanism for employment training, while performance funding formulas that remain largely driven by student FTE are more appropriate for postsecondary vocational education programs. In both types of mechanisms, the state should make provisions for adjusting for major factors that affect outcomes but are outside the direct control of vocational educators. Two of the most important of these factors are local economic conditions and student characteristics. In assessing the performance of employment training programs and postsecondary institutions, it is important that the comparisons be made among like programs and like institutions, which face more or less equal local economic conditions. Fine tuning the procedures for ensuring such controls will take time and may require some research. Research may also be necessary to help the state address the difficult questions about how to treat unlikes. Thus, there may be a consensus that the same placement rate should not be expected of an institution confronting a local unemployment rate of ten percent as would be expected of one facing a rate of five percent. How much lower, however, may the placement rate be for the institution dealing with higher unemployment?

In short, it is possible to define desirable performance objectives for postsecondary vocational education and employment training programs, measure them with reasonable ease and efficiency, tie them to funding, and report results to consumers and policymakers. Without doubt, developing and implementing performance-based policies poses

difficulties. We do not mean to gloss over the extent of start-up time and a number of other technical problems that must be addressed. These problems, however, are not unique to performance funding. Any well crafted state policy, whether performance-based or not, will require time to implement and refine.

The great advantage of performance-based policies is that the problems encountered with implementation are problems based on issues of central concern to the effective operation of programs. Performance funding creates the climate for encouraging important debates over what the objectives of programs should be, how these aims should be defined and measured, how well they are being realized, where the systems are successful, and where they need improvement. Answers to such questions are essential for sound policy.

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